## **ABSTRACT**

A method of treating fabrics, such as de-sized and/or previously bleached hydrophilic fabrics, having threads in a selected machine direction (a weft, or inversely, a warp) and formed of natural or artificial cellulose fibers. The fabric is impregnated with a metal peroxide while leaving the fabric free in the selected machine direction for a period of time necessary for swelling of the fibers of the threads in the selected machine direction and for modification of the cellulose. The fabric is then passed in air while leaving the fabric relaxed and without tension in the selected machine direction, during which the threads in the selected machine direction swell and assume the form of a spring, after shrinkage, followed by at least one rinsing, at least one washing, and at least one squeezing step. Also, the elastic fabrics obtained by the method, and the machine for implementing the method.